

**Participative Budgeting and Managers'
Propensity to Create Budgetary Slack - An
Explanatory Framework**

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1. INTRODUCTION:

Budgeting is an important aspect of organizational life. Lowe and Shaw (1968, p.304) refer to the annual budgeting procedure as probably the most important single decision and control routine of a firm from both the organizational and economic management viewpoints. Budgets provide a focus on planning, both short-term and strategic, on coordination of organizational activities, on control of organizational resources and on organizational performance. Budgets are also used for behavioral purposes: for motivating managers' both in commitment and performance, as a means of control over managers' activities and as a benchmark against which to measure managers' performance.

As stated by Kamin and Ronen (1981, p.471), the budget is the skeleton of the control system and as such reflects the organization's goals and is therefore used as both a yardstick for future planning and a performance standard against which to measure actual performance. Schiff and Lewin (1968, p.51) refer to the budget in its final form as an explicit elaboration of organizational commitments for the year that reflects the resolution of demands for resources made by the various subunits of the firm.

Implementation of budgets have behavioral effects other than those intended by higher level management. Milani (1975, p.274) points out that a budgeting system designed to assist management may become an instrument which is related to functional and/or dysfunctional behavioral consequences. Schiff and Lewin (1968) refer to 'unintended' behavioral results, such as lower level management circumventing the budget and allocating resources to what they perceive as justifiable purposes. Swieringa and Moncur (1972, p.194) summarize the relationship between budgets and those who are involved in the budgeting process as follows:

“...human behavior has implications for budgeting and...budgeting has implications for human behavior”.

Cherrington and Cherrington (1973) state that it is not budgets *per se*, that have an effect on people, but the positive and negative reinforcing consequences associated with budgets. That is, it is not the numbers that form the budget that have behavioral effects

on participants, but rather the intentions behind the numbers, the intentions that are read into the numbers by participants, personalities of parties involved, organizational structure and so on.

Research on both 'intended' and 'unintended' effects stemming from the budgeting process has been extensive and diverse and has examined many of the possible influences noted above (Lowe & Shaw, 1968; Schiff & Lewin, 1968; Cherrington & Cherrington, 1973; Onsi, 1973; Kenis, 1979; Kamin & Ronen, 1981; Brownell, 1982; Merchant, 1985; Chenhall & Brownell, 1988; Lukka, 1988; Chow et al, 1988; Murray, 1990; Dunk, 1991; Lal & Smith, 1992). The main focus of this research has been on the relationship between participation and performance. This paper will focus on an important aspect of this relationship - the propensity of managers' to create budgetary slack.

The *propensity* to create budgetary slack refers to a manager's *tendency* or *inclination* to incorporate a 'buffer' into budgets. The propensity to create budgetary slack (PCBS) is most commonly characterized as the inclination of managers' to set expense budgets higher than the level of costs reasonably expected, so as to obtain a favorable variance result. The same concept applies to revenue budgets, where the inclination is to propose an inflow that is lower than the estimated inflow, so as again to obtain a favorable actual to budget result.

The purpose of this study is to develop and empirically test an explanatory framework of managers' PCBS. This framework will incorporate both situational and personality variables in attempting to explain what motivates managers' to *want* to incorporate slack into budgets.

The impact of the PCBS on the relationship between participation and performance will be discussed in the following section, highlighting the motivation for studying the PCBS concept. The development of an explanatory framework for the PCBS will then follow, leading to the proposition of seven empirically testable hypotheses. The next section details the research method followed by presentation of results. Finally, implications of results in light of the limitations of this study are discussed.

2. MOTIVATION:

The propensity of managers' to create budgetary slack can be seen to be an important aspect of the relationship between participation and performance. That is, if it is argued that participation provides subordinates with the *means* to create slack, then budgetary slack may be an outcome of participative budgeting, particularly if a manager has a high propensity to create budgetary slack. If performance is measured in such a way that favorable variances resulting from the inclusion of slack are incorporated into the outcome measure, then this measure of performance may be seen to be biased in that it does not reflect the true level of performance. Thus, the propensity to create budgetary slack may impact on the association between participation and performance, whereby a high performance outcome may not be the result of positive effects of participation directly increasing the level of performance, as concluded in many studies (Milani, 1975; Abdel-Halim & Rowland, 1976; Kenis, 1979; Brownell, 1981; Merchant, 1981; Brownell, 1982; Tiller, 1983; Brownell & Hirst, 1986; Brownell & McInnes, 1986; Erez & Arad, 1986; Licata et al, 1986; Chenhall & Brownell, 1988; Murray, 1990; Brownell & Dunk, 1991; Frucot & Shearon, 1991). Rather high performance levels may be the result of participation providing the means by which the final performance outcome can be biased in favor of the manager responsible for setting that budget.

Taking account of the above analysis, it is argued that if the measures of performance used in these studies incorporate any effects of budgetary slack, then the conclusions reached in these studies with regard to the participation-performance relationship must be interpreted with care. Self measures of performance have been used in many of these studies (Brownell, 1982; Brownell & Hirst, 1986; Brownell & McInnes, 1986; Chenhall & Brownell, 1988; Brownell & Dunk, 1991), and while there is no evidence as to bias in self-ratings, it cannot be denied that there is a risk that subjects who have obtained favorable variances as the result of incorporating slack may rate their performance as high on the basis of these variances (even with the knowledge of how the variances were obtained). Brownell (1982) refers to the problematic nature of self-ratings of performance, particularly with regard to subjectivity and possibility of attributional biases being incorporated into the ratings.

Cherrington and Cherrington (1973) found that under conditions of high participation, in an experimental situation, performance was clearly superior when rewards were linked to

budget achievement. Results such as these should be viewed with care, as noted above, as the performance evaluation/rewards process has led to an outcome that may be the result of managers 'working the system' by utilizing budgetary slack, rather than simply performing better. This may certainly be the case in the Cherrington and Cherrington study, with performance measured in terms of departure from budget, where positive variance from budget suggests a high performance level.

Mixed results on the association between participation and performance found in various studies do suggest that either there are important variables absent from the analysis and/or that one or more of the measurement instruments are not valid. It is not claimed here that budgetary slack may be biasing the self-ratings of performance in all of these studies, simply that the implications of the above analysis cannot be ignored and that further study of the PCBS concept is necessary to shed further light on the issues raised above.

The concept of 'budgetary slack', as distinguished from the concept of '*propensity* to create budgetary slack', is used in the above analysis for the purpose of providing an illustration of the potential implications where there is both a propensity to create slack and there is available the means to incorporate slack, via participation in the budgeting process. That is, by understanding the far-reaching consequences when the motivation or propensity to create slack is combined with an opportunity to directly access the budgeting process, the importance of first understanding what motivates managers' to incorporate slack is highlighted.

Budgetary slack (the outcome where there is a PCBS and an opportunity to access the budgeting process) represents a potentially negative byproduct of the budgeting process (Wright, 1994). According to Kamin and Ronen (1981) budgetary slack behavior points to failures in the organization design that may lead to inefficient allocation of resources and to inferior profit performance. The negative effects of budgetary slack appear to be most obvious in resource allocation based on budgeted figures and performance evaluation based on budget to actual variances. According to Wright (1994, p.1) the incorporation of budgetary slack into expense budgets suggests a demand for unwarranted additional resources, particularly in situations where the given target is based on a standard estimate of the time it should take to do a job. The result is both an inaccurate and inefficient resource allocation process which must ultimately impact on performance of the organization. Accuracy of a performance evaluation system that emphasizes

budget outcome will also be questionable where budgetary slack is utilized by managers'. Kamin and Ronen (1981, p.484) believe that the biases embedded in the observed, post-smoothed income, as a result of smoothing attempts, render the evaluation process inefficient in that reward and punishment would be contingent not on actual performance but on the basis of measures that have been subjected to "cosmetic" adjustment.

According to Onsi (1973) an evaluation of the effectiveness of a firm's control system requires the identification of the nature of its budgetary slack, the behavioral factors that influence slack build-up and utilization, and the motivational forces that lead to this managerial behavior. Onsi asserts that budgetary slack is not necessarily undesirable *per se*. Budgetary slack can act as a mechanism that stabilizes responses in a wide variety of environmental conditions. According to Kamin and Ronen (1981, p.473) budgetary slack serves as a stabilizing mechanism when it is absorbed and released promptly due to economic conditions under which the firm operates. However, budgets can become dysfunctional when they motivate asymmetry between the absorption and release of slack resources. This asymmetry may occur when managers' are unwilling to adjust the personal benefits obtained from slack downwards. If slack resources are distributed during periods of benign economic conditions but are not redistributed in periods of adversity, the result will be misallocation of resources (Kamin and Ronen, 1981, p.473).

In light of the above arguments, the investigation of what causes managers to create slack may then become more focused on the control of slack, as opposed to the elimination of slack. Lukka (1988) believes that organizations will be able to use their resources more effectively if they can identify why, in what situations, and how, budgetary slack is created in organizations. Kamin and Ronen (1981, p.473) identify three important reasons for detecting budgetary slack: the first is to set the right budget and reduce incorrect extrapolations, the second is to motivate managers' and the third is to identify failures in organizational design which are manifested in the budget.

Evidence suggests that budgetary slack is prevalent in organizations. Schiff and Lewin (1968) concluded that slack may account for as much as 20 to 25 per cent of divisional budgeted operating expenses in three of *Fortune's* 100 largest corporations. Onsi (1973) conducted personal interviews with 32 managers and found that 80% were willing to state explicitly that they bargained for slack in their operating budgets.

This illustrates the necessity of and motivation for developing a framework which explains the process by which participative budgeting can lead to a biased performance outcome or alternatively an unbiased performance outcome. The first step in this process is to develop and empirically test an integrative model of the participative budgeting-PCBS relationship that describes the combined effect of variables that are relevant in determining whether a manager will have a high inclination to create slack or a low inclination to create slack.

Conflicting results on what causes managers' propensities to create budgetary slack (PCBS) and on the outcome - budgetary slack - provides an additional motivation for developing and testing a framework that explains which variables may be motivating managers' to utilize slack during the budgeting process. Many of these conflicting results together with a summary of the variety of approaches taken in studying the PCBS and budgetary slack concepts are discussed below.

Lowe & Shaw (1968) conducted a case study of the annual budgeting process within a large retail chain, and provided anecdotal evidence supporting an association between a reward system that emphasizes budget outcome and managers' propensities to bias the budget in their own personal favor.

Merchant (1985) investigated the association between participation, importance placed on budgets, superiors ability to detect slack and predictability in the production process, on the propensity of managers' to create slack. Results from a survey questionnaire support a statistically significant negative relationship between participation and budgetary slack and superiors' ability to detect slack and budgetary slack. A significant positive relationship between "reactions to expected budget overruns" (one measure of the importance of the 'meeting budget' variable) and the propensity to create budgetary slack was also found. Only weak support was found for the hypothesized negative association between predictability in the production process and PCBS. Lal and Smith (1992) replicated this study using New Zealand data and found similar results.

Chow et al (1988) investigated the effects of a truth-inducing pay scheme and information asymmetry on budgetary slack and performance. Results showed that where information asymmetry was absent, slack did not differ significantly between pay schemes. Where

information asymmetry was present, slack was significantly lower under a truth-inducing scheme.

Dunk (1991) empirically investigated the moderating effect of budgetary slack on relationship between task uncertainty and subunit performance. Results supported the positive effect of budgetary slack in reducing negative effects of task difficulty on performance, but did not support any effect on task variability. Dunk (1993) investigated whether interaction between budgetary participation, information asymmetry and budget emphasis affects budgetary slack. Results from a survey questionnaire indicate that the three independent variables do interact to affect slack, with slack found to be lowest when all three variables are high, and highest when all three variables are low.

Nouri (1994) investigated the interactive effect of two motivational variables: organizational commitment and job involvement, on managers PCBS. Results of a survey questionnaire indicate that for highly committed managers', job involvement is associated with a decreased PCBS. For managers' who are not highly committed, job involvement is associated with an increased PCBS.

The studies summarized above do not represent an exhaustive list, but provide an illustration of the diverse approaches taken and diverse results found from studying the concept of managers' PCBS and the outcome - budgetary slack. The diversity of study approaches and results provide an important motivation for developing and testing a framework that attempts to shed light on many of these prior conflicting results.

With the above motivations in mind, the interaction between three variables resulting in some level of propensity to create budgetary slack will be studied here. The three variables that are hypothesized to interact in determining a manager's PCBS include participation in the budgeting process, interpersonal trust and goal commitment.

Much prior research on managers PCBS has investigated the role of participation by managers in the budgeting process (Lowe and Shaw, 1968; Schiff and Lewin, 1968; Onsi, 1973; Kenis, 1979; Merchant, 1985; Lal and Smith, 1992). Results on the relationship between participation and managers PCBS have been mixed. Onsi (1973), Kenis (1979), Merchant (1985) and Lal and Smith (1992) found a negative relationship between participation and PCBS, where managers who participated in the budgeting process had a

lower propensity to create slack than managers who did not participate in the budgeting process. Contrary to this, results from interviews conducted with managers from three independent divisions chosen from Fortune's 100 largest corporations by Schiff and Lewin (1968) led them to conclude that participation in the budgeting process is positively related to managers PCBS. The extent of evidence to date on the relationship between participation and managers PCBS and the contradictory nature of this evidence highlights the importance of incorporating the variable of participation into any study that attempts to explain what motivates managers to want to create slack.

Trust is defined here in terms of a subordinate's confidence in the superior's motives and intentions with respect to matters relevant to the subordinate's career and status in the organization (Read, 1962, p.8). This can be linked to the budgeting process, where situations of high trust would be characterized by subordinates' having confidence in superiors use of budget information, particularly budget variances. That is, the subordinate has confidence that the superior will not deliberately use unfavorable results to the detriment of the subordinate's career and status within the organization. Blakeney (1986, p.96) describes a high trust situation as one where subordinates' trust superiors' to respond to unfavorable information and to requests for information as *Adult* problems to be solved and not to respond as *Critical Parents* seeking to punish and blame. Distrust is defined as the feeling that another's intentions and motives are not always what he says they are, that he is insincere or has ulterior motives (Mellinger, 1956, p.304).

Ross (1994) investigated the role of trust in an accounting context, hypothesizing that trust acts as a moderator on the effect of performance evaluation style on the level of job related tension experienced by organizational members. Ross theorizes that trust moderates this relationship by improving acceptance by the manager of the performance evaluation process. Three categories of performance evaluation style: the budget constrained style, the profit conscious style and the nonaccounting style, were considered in this study. Results from the study provided evidence that the effect of the style of performance evaluation on job related tension differs according to the level of trust held by subordinates' for their superiors' (p.9). The use of a budget constrained performance evaluation style or a profit conscious performance evaluation style where a relationship characterized by high trust exists, leads to lower levels of job related tension than use of a nonaccounting evaluation style. The results of this study have important implications for both managers' and researchers by providing support for the role of trust in organizational

activities. Information on the role of trust in organizational activities is further extended here by investigating the impact of interpersonal trust on managers' behavior in the organizational budgeting process.

Prior research has supported the importance of the role of goal commitment in the budgeting process (Coch and French, 1948; Argyris, 1953; Searfoss and Monczka, 1973; Latham and Yukl, 1975; Brownell, 1982; Erez and Arad, 1986; Hollenbeck and Klein, 1987; Murray, 1990). In particular Onsi (1973) and Kenis (1979) refer to participative managers as having greater commitment to budget goals and being less likely to manipulate budgets for personal reasons. Nouri (1994) investigated the association between goal commitment and PCBS, finding that managers who are highly committed to organizational goals and having high job involvement exhibited a decreased propensity to create slack. These results support the importance of the variable of goal commitment in explaining why managers have a propensity to create slack in the budgeting process.

The theoretical association between participation, interpersonal trust, goal commitment and PCBS will be discussed in detail in the following section.

3. HYPOTHESES DEVELOPMENT:

3.1 The Association Between Trust and Participation:

Information on the role of trust in organizational activities is extended here by considering the effects of trust on participation in the budgeting process. When a subordinate has a high level of trust in the way in which a superior will deal with unfavorable variances, it is hypothesized that the subordinate will be more willing to take on the responsibility of participating fully in the budgeting process. Subordinates' who have little trust in the way in which superiors will deal with unfavorable variances, are more likely to want to avoid direct involvement, perceived or real, in the budget-setting process. In this way, a subordinate manager is able to ensure that during the performance evaluation process, no responsibility for variances from budget can be attributed to that particular manager. This avoidance behavior is a defensive reaction to the risk that the subordinate manager may leave himself/herself open to criticism and to loss of stature within the organization. The easiest way for a subordinate manager to deal with the risk of criticism or lack of stature within the organization is to avoid any involvement to begin with.

According to Mellinger (1990, p.304) situations of distrust may be characterized by anxiety on the part of the subordinate manager. In this situation, the subordinate manager is highly likely to react in a defensive manner in an attempt to minimize his or her anxiety. Mellinger refers to particular defensive reactions that a manager may undertake in response to this anxiety. Of particular interest here are reactions involving withdrawal and compliance. Withdrawal reactions involve unwillingness on the part of the subordinate manager to provide insight into his or her attitudes on a particular matter. Compliance reactions involve the manager attempting to minimize any disparity between his or her attitudes and the superior managers attitude(s). Withdrawal reactions can be linked to the hypothesis offered here, in that subordinate managers who distrust their superiors will not willingly participate in the budgeting process, as this would involve providing insights into their attitudes on certain matters. Compliance reactions will be more obvious when dealing with situations of pseudo participation (as discussed below).

In situations where participative budgeting is part of a manager's contract, the effect of trust will be most clearly seen in a distinction between true participation and pseudo-participation. A subordinate manager who has a low level of trust in his/her superior, but is required to participate in the budgeting process as a part of an employment contract, may be more likely to actively seek out and implement a superior's suggestions than to attempt to implement his or her own estimates. This is clearly a compliance reaction designed to reduce the subordinate manager's anxiety caused by being required to participate while not trusting the superior manager's intentions. In this case, a subordinate manager is able to rationalize that they were not directly involved in the estimation process, and therefore attach no ego-involvement or personal responsibility for that goal, thereby reducing any anxiety that they may be held responsible for the goals.

In this study, it is possible to investigate the relationship between trust and true participation without having to allow for the compounding effects of pseudo-participation. That is, the instrument used here to measure participation, as developed by Merchant (1981) has been shown to be an effective measure of true participation, as evidenced by the high cronbach alphas reported by Merchant (1981) and Lal and Smith (1992). These alpha values are reported in section 4.2 of this paper.

The instrument used to measure participation includes questions such as 'New budgets include changes that I have suggested'. This question is the key in distinguishing pseudo-participation from true participation - as participants who are willingly involved in the budget setting process and who have fully participated that will answer positively to this question to satisfy their ego. Those avoiding ego-involvement in the budgeting process will answer in the negative to this question as they would have no wish to claim responsibility for any part of the budget. Where true participation is defined as willing and full participation in the budgeting process, the instrument used here will be a reliable measure of this - as those who are required to participate but manage to avoid this, will be classified as non-participants. It may be argued that the participation instrument used here simply 'masks' pseudo-participation. This may well be correct, however for the purpose of this study true participation (according to the above definition) is the variable under consideration, and as long as there are no compounding effects here from pseudo participation, this variable is not part of the analysis.

Hypothesis One may be stated as follows:

A positive and significant relationship is hypothesized between trust and participation, where a manager who trusts his or her superior will be more likely to participate fully in the budgeting process than a manager who has little trust in his or her superior

3.2 The Relationship Between Participation and Goal Commitment:

Kenis (1979, p.709) defines budgetary participation as the extent to which managers' participate in preparing the budget and influence the budget goals of their responsibility centers. Employee participation in the budget-setting process has been widely studied, and it is thought to have both attitudinal and behavioral consequences (Murray, 1990, p.104).

The variable of commitment is associated with the 'strength of intention' construct according to Tubbs [1993]. Strength of intention indicates the amount of personal resources a manager is willing to apply to a particular task. The higher a person's commitment to a task, the higher the level of resources a person will be willing to put into working toward that task.

The positive impact of employee participation has been documented in prior studies. Argyris (1953, p.108-109) concluded that goals are more often accepted if individual members can come together in a group and freely discuss opinions concerning goals and take part in defining the steps by which the goals will be accomplished. Locke (1968, p.185) argued that "the most direct effect of participation is probably to commit the subject to the decision reached".

Coch and French (1948) undertook a study of behavioral reactions to change in a pajama factory and found that employees who participated or who were represented in a group meeting to discuss the need for change, new job plans, and piece rates had a more cooperative and permissive attitude toward making the change than those not represented. As concluded by the authors, people tend to support what they help to create.

Erez and Arad (1986) tested and found a positive relationship between participation and goal commitment, leading to increased performance. According to these authors, the motivational factor of involvement in goal setting significantly affected both performance quantity and quality, and work attitudes.

Hollenbeck and Klein (1987) believe that participation affects goal commitment through the level of freedom one has in setting goals. The amount of participation a subordinate

is allowed in the budgeting process will determine to a great degree the amount of freedom a manager has in setting goals. When a subordinate manager has freedom in setting organizational goals and participates in this process willingly, then he or she will be held responsible for those goals by the organization and will as a result internalize a sense of responsibility for those goals. This is supported by Becker and Green (1962, p.397) who state that "if participation has been successful then these proposed levels ... are accepted as goals by the participants".

Hanson (1966) believes that the act of becoming involved in budget creation enables individuals to associate more closely with budget goals and to identify more closely with organizational goals. Lowin (1968) refers to the contribution of participation to the internalization of organizational goals by organizational members.

When a manager has internalized a sense of responsibility for organizational goals that he or she has set, then they are more likely to feel committed towards those goals - both in the sense of setting accurate, viable goals and in meeting the budgeted figures. Where a manager willingly and enthusiastically participates in goal setting and has internalized a sense of responsibility for organizational goals, there will exist a sense of 'ownership' of goals on the part of the manager. Where a manager feels responsible for creating goals and feels a sense of ownership for these goals, then he or she will feel committed to meeting or even exceeding those goals. This is supported by Searfoss and Monczka (1973) found support for the hypothesis that greater involvement in the decision-making processes will result in greater personal commitment to the organization and its goals. Latham and Yukl (1975) studied independent logging crews and found that the participative goal setting group yielded higher performance and more frequent goal attainment than the groups in the assigned goal condition.

Contrary to this, a number of studies by Latham have failed to find a relationship between participation and goal commitment. Locke (1981) has noted that these particular studies have been characterized by a number of methodological shortcomings.

Based on results from prior studies, Hypothesis Two is offered for testing:

It is hypothesized that there will be a significant and positive relationship between participation and goal commitment, where individuals who have a high level of participation in the budgeting process, will be more committed to budget goals than individuals who have a low level of participation in the budgeting process.

3.3 The Impact of Trust on Goal Commitment:

It is hypothesized here that trust has a significant and positive effect on managers' goal commitment. If subordinate managers' have a high level of trust in their superiors, then for them there will be less of a tradeoff to be made between personal goals (favorable performance evaluation via favorable budget variances) and organizational goals. Schiff and Lewin (1968, p.51) refer to managers' motivation to achieve two sets of goals - the firms goals and their personal goals. Personal goals are seen to be directly related to income, size of staff and control over allocation of resources.

A manager who believes that his or her superior will rely heavily on unfavorable budget variances in the performance evaluation process and may use these variances in a negative way, is more likely to have a greater personal commitment to exposing themselves in the best possible light than a manager who has a high level of trust in the way in which a superior will deal with unfavorable variances. In a situation of high trust, a manager is more able to develop a clear commitment to budget/organizational goals without being hampered by a competing commitment to personal goals that ultimately undermine the effectiveness of information that flows upward through the organization. Evidence of such dysfunctional outcomes where a subordinate manager does not trust a superior manager has been provided by Ross (1994) who found that trust reduces job related tension where a budget constrained or profit conscious performance evaluation style is used, where job related tension is seen as a surrogate for dysfunctional behavior. As noted by Ross (1994, p.629) if job related tension is reduced then the propensity for organizational members to engage in dysfunctional behavior will also decline.

Kamin and Ronen (1981) refer to any tradeoff to be made between personal and organizational goals as lack of goal congruence. These authors refer to one possible manifestation of lack of goal congruence as the creation of budgetary slack. In a situation of low trust, there is an obvious lack of goal congruence. As discussed above, a manager who has little trust in his/her superior will have a commitment to personal goals that may involve achieving favorable actual to budget results to 'protect' oneself from intentions of superiors. Organizational goals may involve concepts such as effective and efficient allocation of resources and accurate flow of information. There is an obvious lack of congruence between these personal goals and the organizational goals. Where such a

discrepancy between personal goals and the organizational goals exists, and where managers are motivated to fulfill personal goals (as in situations of low trust) it will be highly unlikely that subordinate managers will develop any commitment to organizational goals.

Hofstede (1967) investigated the effects on managerial motivation of various control aspects of the budgeting process. One of the major findings of this study was that the manner in which superior managers handled budget problems and the extent to which they discussed budget results with subordinate managers had a strong impact on the subordinate's attitudes about the budget system and his/her perception of the relevancy of budget standards to his/her job. The way in which superior managers handle budget problems and discuss results with subordinate managers will affect the level of trust that a subordinate has in a superior. If a superior manager does not handle budget problems well in the eyes of a subordinate and/or is not willing to discuss budget results openly with a subordinate, then that subordinate manager is unlikely to have a high level of trust in the superior with regard to budgeting matters. Where superiors do not handle budget problems well and as a result subordinate managers do not have a positive attitude about the budgeting process and/or the relevancy of organizational budgets to their position, then commitment to budget goals is highly unlikely.

Murray (1990) refers to the effect of leadership style and participation on goal commitment, where leadership style is defined as the amount of concern a superior will have for a subordinate's thoughts and feelings. This can be linked to the variable of trust, as a superior who shows a great deal of consideration for a subordinate's thoughts and feelings will engender a higher level of trust from that subordinate manager. Greater consideration by the superior will increase a subordinate's confidence in a superior's motives and intentions with respect to matters that are relevant to the subordinate's career and status within the organization. Murray (1990, p.115) states:

“If a leader does not exhibit an amount of consideration so that participation is viewed as genuine, subordinates may not feel as though they have made a contribution. The associated lack of ego involvement may inhibit goal commitment”.

In this paper the relationship between a subordinate manager's trust in a superior and that subordinate's commitment to the budget goals for which they are responsible is reflected in Hypothesis Three offered for testing:

Where a subordinate manager has a high level of trust in a superior, the subordinate's commitment to the organizational goals will be higher than for a manager with a low level of trust in superiors.

3.4 The Relationship Between Participation and the Propensity to Create Slack:

As noted earlier, there exists much contradictory evidence as to the consequences of participation, in particular on the effect of participation on performance and on the PCBS. For example, Onsi (1973) and Kenis (1979) found that participation in budget-setting reduced the need for managers to create slack, as participative managers were seen to become more committed to achieving budget goals and therefore would be less likely to manipulate the budget for personal reasons. Merchant (1985) hypothesized and found that participation in the budgeting process would result in managers being more motivated to reach budget goals and having more positive attitudes toward budgets. Lal and Smith (1992, p.2) subsequently hypothesized that participative budgeting leads to positive communication with managers becoming more committed to budget targets and feeling an absence of pressure to create slack. A negative association between participation and PCBS was reported by Lal & Smith, although only significant at the 10% level.

Contrary to the above evidence, Lowe and Shaw (1968) and Schiff and Lewin (1970) found that participation provides the means by which subordinate managers can incorporate slack into budgets, thus where participative budgeting was in place managers would be more likely to incorporate slack into organizational goals. Young (1985) also hypothesized that subordinates who participate in the budgeting process will build slack into the budget, as participation provides the means for managers to utilize slack. Young found a positive and significant relationship between participation and budgetary slack.

It is proposed here that the participation-PCBS relationship is much more complex than a simple direct impact of participation on a manager's PCBS as previously proposed. The prior mixed results on this relationship provide support for the proposition that there is a complex interrelationship of many variables that will result in some level of PCBS. While it is not possible for this study to investigate all variables that may impact on the inclination of a manager to create slack, it is possible to study the interactive effect of a manageable number of variables that would seem likely to affect directly or indirectly the PCBS factor.

The path model represented below (Path Diagram 1) suggests both a direct effect of participation on managers' propensities to create budgetary slack and an indirect effect

through the variable of goal commitment. It is hypothesized here that the link between participation and PCBS occurs through the intervening variable of goal commitment, as opposed to a direct effect of participation on PCBS. As noted by Murray (1990, p.110):

“Whether participation actually does result in more difficult goals is likely to be situation or organization specific”.

In his 1990 paper, Murray (p.113) explicitly recognizes that participation does not have a direct, unmediated effect on performance (or some measured outcome). Murray proposes a framework in which participation affects performance through a number of mediating and intervening variables. Chenhall and Brownell (1988,p.226) also propose such a framework for the participation-outcome relationship:

“...the effects of participation, if any, are indirect and are conveyed to outcome criteria via some intervening construct which links the variables”.

Support is therefore offered for a more complex indirect relationship between participation and managers PCBS than previously hypothesized (Onsi, 1973; Kenis, 1979; Merchant, 1985; Lal and Smith, 1992).

In this study, a less complex model than that proposed by Murray is suggested, in which participation is hypothesized to have a significant indirect impact on PCBS (a measured outcome) through the variable of goal commitment.

The direct relationship between participation to PCBS is expected to be non-significant, while the indirect relationship between participation and PCBS through goal commitment is expected to be larger and statistically significant. This is supported by reference to the theory developed in the above studies (Merchant, 1985; Lal & Smith, 1992) which refer to participation reducing PCBS through an effect on subordinate managers' commitment. As noted above, the mixed results obtained from investigating a direct participation - PCBS relationship also provides support for this hypothesis

Hypothesis Four may be stated as follow:

It is hypothesized that participation will have a statistically significant effect on the variable of PCBS through the intervening variable of goal commitment, while the direct effect of participation on PCBS is expected to be non-significant.

3.5 The Effect of Interpersonal Trust on the Propensity to Create Slack:

It is hypothesized here that interpersonal trust will directly and significantly impact on the propensity of subordinate managers' to create budgetary slack. If a subordinate manager has a high level of trust in the way in which a superior will deal with unfavorable variances, it is hypothesized that the lower-level manager is less likely to need to incorporate slack into budgets. On the other hand, if subordinate managers' have little trust that superiors' will not focus on unfavorable budget variances, then it is hypothesized that lower-level management will have a higher propensity to create slack as a means of ensuring that there are no unfavorable variances for upper-level management to be concerned with.

The impact of interpersonal trust on the accuracy of information provided by lower-level managers' to superiors' has been documented in prior studies. Mellinger (1956, p.304) comments:

"...the primary goal of communication with a distrusted person becomes the reduction of one's own anxiety, rather than the accurate transmission of ideas".

Results of a case study within a large government department, involving interviews, review of documents and observation, led to the following conclusion from Mellinger (p.307):

"These findings support the theory that if B is motivated to communicate with A, and if B distrusts A, then he will communicate in such a way as to conceal from A information about his own attitudes towards issue X."

Read (1962) hypothesized that a subordinate's trust in his/her superior's motives and intentions modifies the relationship between mobility of organizational members and accuracy of information. A high level of trust is seen to lead to more accurate information being communicated to the superior, and a low level of trust is seen to lead to less accurate information being transferred for highly mobile individuals. Results of both a survey and interviews are summarized by Read as follows:

"Analysis of results indicates that the relationship between mobility need and accuracy of upward communication was strikingly modified by the interpersonal trust condition..." (p.10)

The results were in the expected direction, where less accurate communication was found in the low trust condition. Read concludes:

"... unilateral subordinate-superior trust appears to have the greatest single effect upon accuracy of communication" (p.10).

Blakeney (1986) develops a transactional view of trust with regard to organizational communication and refers to trust as "a key variable in the organizational climate because it influences the transformation of information" (Roberts & O'Reilly, 1974b, and O'Reilly & Roberts, 1974, as quoted by Blakeney, 1986 p.95). Blakeney refers to situations of low trust being characterized by subordinates communicating only favorable information to superiors, whether it is important or not. Situations of high trust are characterized by the communication of important information, whether favorable or not.

The empirical and anecdotal evidence on the effects of interpersonal trust on accuracy of information communication can be logically linked to the negative relationship hypothesized here between trust and PCBS (Hypothesis Five). That is, budgetary slack is a clear example of inaccurate information communication between subordinates and superiors, where the subordinate conceals from the superior his or her true estimate with regard to the budget. When trust is characterized as how subordinates discern the use of information communicated to the superior in performance evaluation, then it can be concluded that in situations of high trust, subordinate managers are less likely to introduce slack into budgets as they have little need to do so, that is, information that is important will be communicated whether favorable or not (Blakeney, 1986). This conclusion can be further supported by referring to the result found by Onsi (1973) that managers create slack for two reasons, one being pressure by top management to attain or exceed budgeted figures. Following from this, if subordinates are confident that managers will not focus only on unfavorable variances in performance evaluation, then pressure to meet or exceed budget will be offset to some extent and there is less motivation to incorporate slack into budgets as a means of coping with the situation. For managers who are confident that upper-level management will focus mainly on unfavorable variances in evaluating performance, pressure from superiors to meet or exceed budget is likely to be intensified, increasing the motivation to incorporate slack during the budgeting process. This is supported by Ross (1994) who found that trust

moderates the relationship between performance evaluation style and job related tension, where job related tension is seen as a surrogate for dysfunctional behavior.

Based on the above analysis, Hypothesis Five is offered for empirical testing:

As the level of trust that subordinates have in their superiors actions and intentions increases, the propensity of subordinate managers to create slack will decrease.

3.6 The Relationship Between Commitment and The Propensity to Create Budgetary Slack:

When commitment to reaching a goal is high, it is hypothesized that a subordinate's PCBS will be low. That is, where a subordinate manager is willing to be held responsible for setting goals, and has a high commitment to those goals and to the organization, he or she is unlikely to have a high level of desire to 'fudge' the figures at the expense of the organization. Where a manager is committed to organizational goals, it would be contradictory for him or her to set loose budget goals, in terms of putting their own personal interests ahead of organizational goals. The notion of goal commitment is itself completely contradictory to managers' having an inclination to incorporate slack into budgets. As noted earlier, goal commitment is associated with the strength of intention construct, whereby the higher the level of commitment a manager has to a goal, the greater amount of personal time and resources that manager will devote to meeting that goal. The notion of setting goals lower than realistically expected so as to obtain favorable budget variances is opposed to the notion of managers' being committed to organizational goals, and investing personal resources into meeting those goals.

This is supported by evidence from prior studies (Latham & Yukl, 1975; Erez & Arad, 1986) which suggests that in most cases where participative budgeting is in place, and is received well by participants, goal commitment is increased and more difficult goals are set than those in non-participative situations. The strength of intention construct is therefore realized in terms of managers' investing personal resources by setting more difficult goals. Murray (1990,p.107) also recognizes the connection between goal commitment and effort extended toward some outcome, with the following statement:

“If an individual becomes committed to a given goal, it will influence the individual's actions and consequently performance”.

Brownell (1982, p.143) refers to the effect of commitment on subordinates' budget related behavior:

“For example, participation, by enhancing commitment to the budget by subordinates [Searfoss and Monczka, 1973], may serve to improve the intrinsic *value* to the individual of achieving the budget and at the same

time enhance the *probability* that goal-directed effort will be successful”.

As noted earlier, Onsi (1973) and Kenis (1979) described participative managers’ as becoming more committed to achieving budget goals and therefore less likely to manipulate budgets for personal reasons. Nouri (1994) found that for managers’ who are highly committed to the organization’s goals and values, job involvement is associated with decreased propensity to create slack.

Where a manager attaches a high intrinsic value to the budget, he or she will be unlikely to propose estimates that clearly understate the expected input and output in order to further their own personal gains. As stated earlier, the whole notion of budget slack is contrary to goal commitment as previous authors have described it (Searfoss & Monczka, 1973).

Hypothesis six, which describes the relationship between goal commitment and PCBS is offered for testing:

A manager who has a high goal commitment will be less likely to have a high propensity to create budgetary slack than a manager with low goal commitment.

3.7 The Indirect Association Between Trust and Propensity to Create Slack:

The relationship between interpersonal trust and the propensity of subordinate managers to create slack is hypothesized here to be both direct and indirect. The direct relationship between trust and PCBS is reflected in hypothesis five offered above for testing. The indirect relationship between trust and PCBS is hypothesized to occur through the variable of goal commitment. The indirect relationship between trust and PCBS is hypothesized here to be negative and highly significant, where a high level of trust is hypothesized to increase goal commitment (as indicated in hypothesis three offered here for testing), which in turn results in subordinate managers having a lower PCBS (as indicated in hypothesis six offered here for testing). A low level of trust is predicted to result in managers having a higher PCBS, through the impact of low trust in decreasing goal commitment which in turn leads to an increase in managers propensity to create slack.

Hypothesis seven, which summarizes this indirect relationship, is offered for testing:

It is hypothesized that trust will have a statistically significant negative effect of managers PCBS through the intervening variable of goal commitment.

A diagram of the direct and indirect relationships between participation, trust, goal commitment and managers' PCBS as hypothesized above is shown below in Path Diagram 1:



PATH DIAGRAM 1.

The hypothesized causal relationships between the variables are indicated by the unidirectional arrows. The seven hypotheses offered here for testing are represented by the six arrows in the above diagram.

4.0. RESEARCH DESIGN:

4.1 Sample Selection:

A random sample of 100 firms was selected from the register of firms published in Australian Public Companies Guide November 1996-March 1997. The sample was selected from this Public Companies Guide, as the companies included in the guide were thought to be large enough to support the number of levels of management needed to obtain relevant and sufficient data for this study. The organizations were selected randomly from a random numbers table. The sample number of 100 companies was thought to be sufficient to provide the number of responses and amount of data necessary to provide a wide range of values for the variables studied. The combination of random selection, range of organizations from which data was obtained and the size of the sample provide external validity to the results of this study.

A senior corporate official of each firm was contacted by telephone to explain the nature of this study and to identify lower-level managers' who were actively involved in the budgeting process. Questionnaires were then sent to these officials, who agreed to distribute the surveys to the managers' identified. A total of 130 surveys were distributed. Refer to the appendix for a draft copy of the questionnaire.

4.2 Measures:

(a) Propensity to Create Budgetary Slack - This variable has been measured in prior studies (Merchant, 1985; Lal & Smith, 1992; Wright, 1994) using the four-item instrument developed by Onsi (1973). Cronbach alphas reported by Merchant and Lal and Smith of 0.70 and 0.74 respectively indicate an acceptable level of reliability. However, it is claimed here that this measure of Propensity to Create Budgetary Slack may be flawed to some extent. The Onsi instrument (please refer to Appendix Two) is seen to intuitively associate the *motivation* to create slack with the *opportunity* to do so, in the form of participation in budgeting activities. In particular, the use of the word 'submit' in two of the four questions, suggests that the manager completing the questionnaire has the power to submit budgets, which infers a fairly high level of participation. The way the questions are phrased in this instrument assume that to have a propensity to create slack, managers' must participate to some extent in the budget-setting process.

As the relationship between participation and managers' PCBS is being investigated here, it is essential that a measure of one variable does not have built into it assumptions about the other variable included in the analysis. The limitations associated with Onsi's measure do cast some doubt on the ability of this instrument to provide a 'true' measure of propensity to create slack, separate from some measure of participation in the budgeting process.

A modified version of the Onsi measure is included in the draft questionnaire (Appendix One). The modifications made to the original instrument include replacing the word 'submit' with the word 'propose' so as to broaden the range of participation associated with a managers propensity to create slack. That is, the word 'propose' covers an initial and informal form of participation through to a more formal and involved level of participation. The word 'submit', however, suggests a level of participation at least at the point where a manager would formally submit budget estimates.

Another change to the Onsi PCBS instrument was in generalizing the application of the questions so that they do not refer specifically to plant managers, but rather to all managers.

A cronbach alpha was calculated to test the level of reliability of this altered measure. The alpha value for the PCBS instrument is .793, which is higher than the cronbach alphas reported above for the original Onsi measure.

Responses to the questions were measured on a five point Likert scale, where the low end of the scale indicates a low propensity to create slack and the high end of the scale indicates a high propensity to create slack.

(b) **Participation** - The level of participation in the budgeting process will be measured using two scales developed by Merchant (1981) and used subsequently by Merchant (1985) and Lal and Smith (1992). The first scale, *Influence on Budget Plans*, is a two-item instrument, while the second scale, *Personal Involvement in Budgeting*, is a three-item instrument. The cronbach alphas reported by Merchant (1985) were 0.52 for the first scale and 0.60 for the second scale. Lal and Smith (1992) reported cronbach alphas of 0.72 and 0.79 respectively. The cronbach alphas calculated here for these measures are 0.7547 and 0.8616 respectively. These cronbach alphas, particularly those reported by Lal and Smith are quite acceptable.

(c) **Goal Commitment:**

The level of goal commitment will be measured using the instrument developed by Hollenbeck et al [1989]. The instrument consists of seven questions that require responses on a five item Likert scale. Five of the questions (question two through to question six) are reverse scored on completion. In this way, a high score on this instrument represents a high goal commitment and vice versa. A cronbach alpha of 0.88 has been reported for this measure by Hollenbeck et al. The cronbach alpha calculated here for the goal commitment instrument is 0.8514. The high cronbach alpha reported for this measure suggest a high level of reliability.

(d) Trust:

The four item measure used here to measure the variable of trust was developed by Read (1962) and was used by Hopwood (1972), Otley (1978) and Ross (1994). The cronbach alpha coefficient measured for this instrument was 0.81. The cronbach alpha measured here for the trust instrument is 0.8754. Responses to the four items are required on a five point Likert Scale, with the low end of the scale representing a low level of trust in superior managers and the high end of the scale representing a high level of trust in superior officers.

4.3 Data Analysis:

Path analysis is the technique used here to test the following hypothesized relationships. Path analysis is a method for studying patterns of causation among a set of variables (Pedhazur, 1986). According to Mia [1987, p.550] this technique enables us to estimate the direct relationships, the indirect relationships, the spurious relationships and the unanalyzed relationships among the variables of interest.

The role of theory underlies the effective use of path analysis in investigating patterns of causation between variables. According to Pedhazur (1986), path analysis cannot be viewed as an effective method of analysis without strong theory to provide hypothesized linkages between variables. The analysis itself has no meaning without the theory. In fact for the application of path analysis to be valid, the researcher must make his or her theoretical formulations explicit.

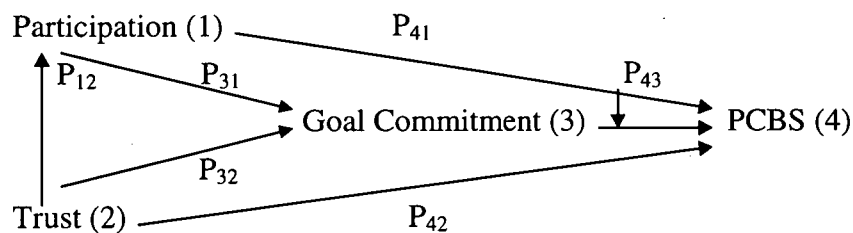
The analysis of the data is designed to shed light on the question of whether or not the causal model is consistent with the data (Pedhazur, 1986, p.579). If the theoretical model is consistent with the data, it does not constitute proof of the theory, but simply support for it. If the model is inconsistent with the data then doubt exists as to the validity of the theory that has generated it.

The assumptions that underlie path analysis as presented in this paper are: the relations among variables in the model are linear, additive and causal, residuals are not correlated with variables preceding them in the model, there is a one-way causal flow through the model and variables are measured without error. The data obtained in this study will be tested for these assumptions in the results section of this paper.

In a causal model, distinction must be made between exogenous and endogenous variables. In this case, trust is the only exogenous variable to the model, as its variability is determined by causes outside the model. Participation, goal commitment and PCBS are endogenous variables as their variation is explained within the model proposed in this paper. While in reality variation in participation, goal commitment and PCBS may be explained by other variables not included in this study, we are only concerned with what has been hypothesized here. Therefore, participation, goal commitment and PCBS are endogenous variables according to the limits of the model proposed in this paper.

The unidirectional arrows drawn between variables in Path Diagram 2 (below) represent hypothesized causal relationships. As only one variable is exogenous, all hypothesized relationships can be analyzed. Relationships between variables that are exogenous to the path model remain unanalyzed. Each endogenous (dependent) variable in a causal model may be represented by an equation consisting of the variables upon which it is assumed to be dependent, and a term representing residuals, or variables not under consideration in the given model (Pedhazur, p.583). The equations representing the endogenous variables in the model proposed here are presented below.

The relationship between the dependent variable and *each* independent variable hypothesized as a cause of that dependent variable, is described by a path coefficient represented as a p with two subscripts in the path diagram (refer Path Diagram 2 below) and in the equations below. Path coefficients indicate the amount of expected change in the dependent variable caused by a one unit change in the independent variable.



PATH DIAGRAM 2.

Where all of the assumptions discussed above are met, the solution for the path coefficients takes the form of an ordinary least squares solution for the β 's - standardized regression coefficients (Pedhazur, p.584). The major distinction between ordinary regression analysis and path analysis, then, lies in the amount of decomposition of the hypothesized relationships between variables. When applying ordinary regression analysis in this case, for example, PCBS would be regressed in a single analysis on Participation, Trust and Goal Commitment. In applying path analysis, three regression

analyses are necessary to examine the decomposed relationships hypothesized here. As noted above, path analysis also allows further decomposition of a correlation between an exogenous and endogenous variable into a direct effect, indirect effect, spurious effect and unanalyzed effect.

A direct effect of an independent variable on a dependent variable is indicated by the path coefficient from that variable to the dependent variable. An indirect effect can be illustrated here by referring to the effect of trust on goal commitment through the variable of participation (ie. $P_{12}P_{31}$). Part of the relationship between participation and goal commitment can be termed as spurious, due to both variables sharing a common cause - Trust. This spurious relationship can be indicated by $P_{12}P_{32}$.

If the relationship between participation and trust was represented by a curved line with arrowheads at both ends (indicating that both variables are exogenous and correlated), then that part of the correlation between participation and goal commitment that is due to correlation of participation with another cause of goal commitment (ie. trust) is left unanalyzed. This is due to the inability to state the cause or causes for the correlation between trust and participation, as in this case they would both be exogenous variables with causes determined outside the model. The total effect of an independent variable on a dependent variable is represented by the correlation coefficient.

Path analysis is used here for the purpose of studying the complex interrelationships between three variables that are hypothesized to affect managers PCBS. The ability to study patterns of causation between the variables, including decomposition into direct effects, indirect effects and spurious effects provides valuable insights that would not be possible with ordinary regression analysis. In a case such as this, where a *framework* of causation is hypothesized, path analysis allows fuller understanding of what causes managers to have a propensity to incorporate slack into budgets.

The equations representing each of the endogenous variables in the model are shown below with reference to the hypotheses to be tested:

Hypothesis One:

The effect of trust on participation is tested by the following equation:

$$X_1 = P_{12} X_2 + PR$$

Where, X_1 = participation

P_{12} = path coefficient from trust to participation

PR = standardized residuals

According to Hypothesis Two, Path 12 is expected to be positive and highly significant, indicating the positive and significant impact of trust on the level of participation.

Hypotheses Two and Three:

Hypothesis two and three are tested by calculating equation number 2 as follows:

$$X_3 = P_{31}X_1 + P_{32}X_2 + PR$$

Hypothesis two proposes positive impact of participation on goal commitment. This will be tested by the significance of path 31, which measures the direct path from participation to goal commitment. Path 31 is hypothesized to be positive and significant, indicating that greater participation in the budgeting process will lead to subordinate managers having a higher goal commitment.

Hypothesis three proposes a positive impact of the variable trust on goal commitment. This will be tested by the direction and significance of path 32, which measures the direct path between trust and commitment. This path is expected to be positive and significant, indicating that the higher the level of trust a subordinate has in a superior, the more likely the subordinate will be committed to organizational goals, than when there exists a low level of trust in upper-level management.

Hypotheses Four, Five, Six and Seven:

The relationships proposed in hypotheses four, five, six and seven can be tested by equation three as follows:

$$X_4 = P_{41}X_1 + P_{42}X_2 + P_{31}X_1 + P_{32}X_2 + P_{43}X_3 + PR$$

The hypothesis that participation has a more significant indirect effect on PCBS through the variable of goal commitment can be tested by comparing the path coefficient P_{41} from the above equation with the indirect path $P_{31}P_{43}$. Path 41 is expected to be insignificant, while the indirect Path 31/43 is expected to be significant.

Hypothesis five, which proposes a direct negative relationship between trust and a manager's PCBS will be tested by the direction and significance of path 42. This path is expected to be negative and significant, whereby a high level of trust is associated with a manager having a low PCBS, and a low level of trust is associated with a higher level of PCBS.

Hypothesis six, which proposes a negative and significant impact of goal commitment on a manager's PCBS, will be tested by the direction and significance of Path 43. According to Hypothesis Six, Path 43 is expected to be negative and significant where managers who are highly committed to organizational goals will have a lower PCBS than managers who are not committed to organizational goals.

Hypothesis seven, which proposes a significant indirect negative relationship between trust and PCBS, will be tested by the direction and significance of $P_{32}P_{43}$. Path 32/43 is expected to be negative and significant, where a high level of trust will result in a high goal commitment which in turn will result in managers having a lower PCBS.

5.0 Results

Of the 130 surveys distributed, 90 were returned. Three of these were incomplete and were unable to be used and consequently had to be discarded. The usable response rate was (87/130) 67% which is quite respectable for social research.

The average period of employment of respondents in their current position was eight years, with actual experience in the position for which they are employed ranging from six months to twenty-five years. Respondents were drawn from a diverse range of industries, from engineering services, the banking sector, the finance sector, retail services and manufacturing. Details of the size of departments and organizations from which respondents were drawn are provided below:

Number of Employees By Department and Organisation:

Number of Employees	Department	Organisation
Less than 10	24	2
10-19	25	2
20-49	20	6
50-99	6	11
100-199	5	10
200-499	4	12
500-999	1	12
More than 1000	2	32

The data from useable surveys was analyzed using the SPSS Statistical Package. Prior to discussing the results of the regression analysis, the assumptions that must be met by the data will be considered. The assumptions that underlie path analysis, as previously discussed, include normality, linearity, independence of residuals, and effects of outliers. The data has been tested to ensure that all of these assumptions have been met and these results are provided below.

Descriptive statistics for the four variables are presented below:

Descriptive Statistics:

Variable	Mean	Std Devn	Min	Max	Skewness	Kurtosis
Partn	3.717	.850	1.2	5.0	-.8501	.2925
Trust	3.402	1.008	1.0	5.0	-.6788	-0.4631
GC	3.923	.772	1.8571	5.0	-1.2122	.6022
PCBS	2.537	1.009	1.0	4.75	.4045	-.7957

As reported in the above table, the data does not suffer from excessive skewness or kurtosis, supporting an assumption of normality. Normal plots of regression standardized residuals for the dependent variables in each of the three regressions also indicated relatively normal distributions. These plots were unable to be printed due to problems with the SPSS program on the network at the Department of Accounting and Finance, University of Tasmania.

The assumption of linearity is tested by referring to the scatterplots of residuals against predicted values for each of the three regressions. These scatterplots show that there is a clear linear relationship between the predicted values, consistent with the assumption of linearity. A relatively random distribution of the residuals indicated by the scatterplots supports the assumption of the independence of the residuals.

A test for outliers was conducted by requesting casewise plots for outlying cases with standard deviations greater than three (3). There were no univariate outliers found.

With all assumptions underlying path analysis having been met by the data obtained for this study, the details of the regression analyses can now be presented and discussed.

Both Pearson and Spearman correlation statistics for the data are presented below:

Pearson Product Moment Correlation Statistics:

	PCBS	Trust	Partn	GC
PCBS	1.000	-.439	-.371	-.688
		(.000)	(.000)	(.000)
Trust	-.439	1.000	.406	.638
	(.000)		(.000)	(.000)
Partn	-.371	.406	1.000	.540
	(.000)	(.000)		(.000)
GC	-.688	.638	.540	1.000
	(.000)	(.000)	(.000)	

Spearman Rank Order Correlation Statistics:

	PCBS	Trust	Partn	GC
PCBS	1.000	-0.3034	-.2752	-.5525
		(.002)	(.005)	(.000)
Trust	-.3034	1.000	.3032	.4168
	(.002)		(.002)	(.000)
Partn	-.2752	.3032	1.000	.3822
	(.005)	(.002)		(.000)
GC	-.5525	.4168	.3822	1.000
	(.000)	(.000)	(.000)	

As predicted, all hypothesized links between variables are represented by strong correlations as reported above. These correlation statistics represent the total effect of one variable on another, as discussed earlier. The decomposition of these total effects into direct effects, indirect effects, spurious effects and unanalyzed effects will be made below. The Pearson product-moment correlation coefficients will be reported in the table of decompositions.

Three linear regressions were run on the data to obtain path coefficients. The data obtained from running these linear regressions are provided below:

Regression of Trust on Participation:

Variable	β	Standard Error	t value	Significance
Trust	.405683	.083574	4.092	.0001

The F value for the overall regression equation is 16.74506 with a significance level of .0001.

Regression of Partn and Trust on Goal Commitment:

Variable	β	Standard Error	t value	Significance
Partn	.336023	.076576	3.986	.0001
Trust	.501588	.064554	5.950	.0000

The F Value for the overall regression equation is 42.21116 with a significance of .0000.

Regression of Partn, Trust and GC on PCBS:

Variable	β	Standard Error	t value	significance
Partn	.00001	.112800	.001	.9991
Trust	-.00004	.103964	-.004	.9966
GC	-.687976	.147388	-6.101	.0000

The F Value of the overall regression equation is 24.89349 with a significance of .0000.

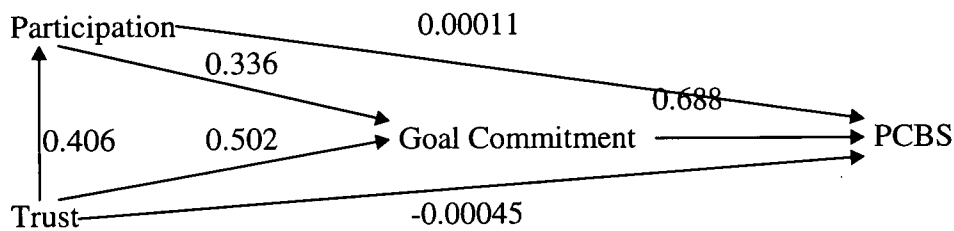
The F values reported above show that overall the three regression equations are statistically significant.

As noted earlier, the β 's obtained using ordinary least squares analysis, represent the direct path coefficients from an independent variable to a dependent variable. A complete analysis of direct, indirect and spurious effects is provided in the table below. Indirect and spurious path coefficients are obtained by multiplying path coefficients between the variables under consideration. The total effect of one variable on another consists of the direct path between the variables and also the sum of any indirect paths from that variable to the other and the sum of any spurious effects resulting from the both variables having a common cause. These path coefficients obtained from linear regression analysis are presented in the table below:

Path Coefficients:

From:	To:	Symbol	Direct	Indirect	Spurious	Total
Trust	Partn	P_{12}	.406			.406
			(.000)			(.000)
Partn	GC	P_{31}	.336		.204	.540
			(.000)		(.000)	(.000)
Trust	GC	P_{32}	.502	.136		.638
			(.0000)	(.000)		(.000)
Partn	PCBS	P_{41}	.00011	-.231	-.140	.371
				(.000)	(.000)	(.000)
Trust	PCBS	P_{42}	-.00045	-.439		-.439
				(.000)		(.000)
GC	PCBS	P_{43}	-.688			.688
			(.0000)			(.0000)

The results of the analysis are shown below in Path Diagram 3 below:



PATH DIAGRAM 3.

Direct paths are the β coefficients obtained from regression analysis. Indirect paths are calculated as the product of the hypothesized path - for example, the indirect path from trust to goal commitment is calculated as the path coefficient from trust to participation (0.406) multiplied by the path coefficient from participation to goal commitment (0.336) giving a total indirect path coefficient of 0.136.

Spurious paths are calculated as the product of the paths from the variable hypothesized as the common cause - for example, the spurious component of the participation-goal commitment relationship is calculated as the path coefficient from trust (the common cause) to participation (0.406) multiplied by the path coefficient from trust to goal commitment (0.502) giving a spurious path coefficient of 0.204. This path coefficient quantifies the effect of that part of the participation-goal commitment relationship which is due to these variables having a common cause.

Hypothesis One:

From the above table it can be seen that the direct path coefficient from trust to participation is equal to the correlation coefficient between the two variables. This is the result of participation being hypothesized as dependent on a single cause (trust) and a residual.

Hypothesis one predicts a positive and significant direct relationship between trust and participation, where a subordinate who has a high level of trust in a superior will participate more fully in the budgeting process. A subordinate who does not have a high level of trust in a superior manager is hypothesized to want to avoid participation in the budgeting process.

This hypothesis is tested by referring to the direct path between trust and participation - P_{12} . This path has a positive value of 0.406 and is highly significant at the 0.000 level as expected.

The data supports the hypothesized positive relationship between trust and participation.

Hypothesis Two:

The total effect of participation on goal commitment can be represented by the following equation:

$$r_{13} = P_{31} + P_{12}P_{32}$$

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Hypothesis two predicts a positive relationship between participation and goal commitment, where subordinate managers' who participate fully in the budgeting process will have a higher commitment to the goals. This hypothesis is tested by referring to the direct path coefficient from participation to goal commitment.

The path coefficient P_{31} is 0.336 and is significant at the 0.000 level. This supports a positive and significant relationship between participation and goal commitment.

There is also a positive and significant spurious relationship between participation and goal commitment, associated with the fact that both variables have a common cause - Trust.

Hypothesis Three:

The total effect of trust on goal commitment is represented as follows:

$$r_{23} = P_{32} + P_{12}P_{31}$$

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Hypothesis three refers to the positive impact of trust on a managers level of goal commitment. Managers' with a high level of trust in superior officers are hypothesized to be more committed to organizational goals than managers' who do not trust their superior officers. This is tested by referring to P_{32} which is the direct path from trust to goal commitment. From the above table, it can be seen that the value for this path is 0.502 with a significance level of 0.0000. This result provides very strong support for the hypothesized relationship between trust and goal commitment.

It also interesting to note that trust has a significant indirect effect on goal commitment through the variable of participation. This relationship is represented by a path coefficient of 0.136 which is significant at the 0.000 level.

Hypothesis Four:

The correlation between participation and PCBS can be represented by the following equation:

$$r_{14} = P_{41} + P_{31}P_{43} + P_{12}P_{32}P_{43} + P_{12}P_{42}$$

DE IE SE SE

Hypothesis four predicted that participation would have a more significant indirect effect on PCBS through goal commitment than a direct effect on PCBS. To test this hypothesis, we must compare the path coefficient from participation to PCBS (P_{41}) with the indirect path coefficient through goal commitment ($P_{31}P_{43}$). The direct path coefficient (from the above table) is 0.00011 and is not statistically significant. The indirect path through goal commitment is -0.231 and is statistically significant at the .000 level. This negative indirect path coefficient suggests that increased participation will indirectly reduce a managers PCBS through its effect on goal commitment.

The data supports hypothesis four, where the indirect effect of participation on PCBS is more significant than a direct effect of participation on managers' PCBS. It is only by simultaneous assessment of participation's effect on goal commitment, and the latter's effect on PCBS that we gain insight into participation's precise effects (Chenhall and Brownell, 1988).

Part of the correlation between participation and PCBS includes a spurious component, which as reported above is statistically significant. This spurious component is due to the common cause affecting the two variables (variable two - trust) and can be referred to as the noncausal part of the correlation coefficient. This spurious component represents 'excess noise' resulting from the framework of hypothesized causal relationships. That is, the combination of a number of hypothesized causal relationships within a framework will result in "noise" from the number of causal effects between variables. These spurious effects do not represent hypothesized causal relationships but are simply a byproduct of the combination of a number causal relationships.

Hypothesis Five:

The correlation coefficient between trust and PCBS can be decomposed as follows:

$$r_{24} = \underset{\text{DE}}{P_{42}} + \underset{\text{IE}}{P_{32}P_{43}} + \underset{\text{IE}}{P_{12}P_{41}} + \underset{\text{IE}}{P_{12}P_{31}P_{43}}$$

Hypothesis five predicts a negative and highly significant relationship between trust and PCBS, where a high level of trust between subordinate and superior managers' leads directly to subordinate managers having a lower PCBS. This hypothesis is tested by referring to the path coefficient P_{42} .

The value for this path coefficient is -.00045 which is not statistically significant. Hypothesis Five is not supported by the data.

The indirect effect of trust on PCBS is negative and significant -0.439 at the 0.000 level. Therefore it appears that contrary to the theory developed earlier, a high level of trust in a superior manager does not appear to directly cause a manager to have a low PCBS. However, trust does appear to indirectly cause managers' to have lower PCBS, by its effect on the variable of goal commitment.

Hypothesis Six:

This hypothesis predicts a negative and highly significant relationship between goal commitment and PCBS, where a manager who is highly committed to organizational goals will have a lower PCBS than a manager who is not highly committed. The value for P_{43} has been calculated as -0.688 with a significance level of 0.0000.

The calculated path coefficient provides support for the hypothesis offered with regard to the goal commitment - PCBS relationship.

Hypothesis Seven:

As noted in the analysis of results for Hypothesis five, the results do support a significant negative indirect relationship between trust and PCBS, through the variable of goal commitment. The value for the $P_{32}P_{43}$ was calculated as -0.439 with a significance level of 0.000.

The results do provide support for an indirect relationship between trust and managers propensities to create slack.

6.0 DISCUSSION:

The results obtained from statistical analysis of the survey data suggest that the model of participative budgeting offered here for testing is generally consistent with the data. Six hypotheses that describe the causal relationships underlying this model were offered for testing and five of the six hypotheses were found to be consistent with the data. Only one hypothesized causal relationship was not supported by the results.

Hypothesis one refers to the relationship between trust and participation, where managers' who have a high level of trust in their superiors' would be more likely to participate in the budgeting process than managers' who do not have a high level of trust in superiors'. The path coefficient (a direct relationship) between trust and participation was found to be positive and highly significant, indicating that the higher the level of trust a manager has in his/her superior the greater amount of participation they have in the budgeting process. Conversely, the lower the level of trust a manager has in his/her superior the lower the amount of participation in the budgeting process.

As noted earlier, a manager may be unable to avoid participating in the budgeting process if participation forms part of the manager's contract. A defensive reaction by a manager in a situation of low trust, such as implementing a program of pseudo-participation, has not been measured in this study. Rather the participation instrument used in this study measures true participation, but not pseudo participation. Therefore there is an assumption built in to this study that managers' are able choose whether to participate or not, or at least are able to negotiate a level of participation. While the results are consistent with a causal relationship between trust and participation, it would be interesting to measure the effect of trust on participation, including pseudo participation.

Hypothesis two states that participation will have a positive and significant effect on managers goal commitment. The results obtained above are consistent with this hypothesis with the path coefficient from participation to goal commitment found to be positive and significant. Where managers' participate in setting budgets and have the ability to choose or negotiate a level of participation (as discussed above), the level of commitment to those budgets or goals will be enhanced, as compared with a manager who does not participate in setting budgets. The act of creating, developing and implementing goals, or at the very least being involved in this process, appears to increase a manager's inclination to devote personal resources to meeting those goals.

As indicated by the path diagram and the results, the relationship between participation and goal commitment is a direct one. This direct relationship also forms part of the indirect relationship between participation and PCBS, whereby participation increases goal commitment, and an increased goal commitment then results in managers' having a lower PCBS (this part of the relationship will be discussed in more detail when considering hypothesis six).

Hypothesis three refers to the impact of trust on managers' commitment to organizational goals. The results from the analysis suggest that the data is consistent with a positive and highly significant direct effect of trust on managers' goal commitment. Where lower-level managers' do not trust their superiors' motives and intentions with regard to the budgeting process, these managers' will be primarily concerned with coping with this distrust and its possible consequences, such as job related tension (Ross, 1994). When a manager is focused on dealing with a potentially threatening situation, and the most obvious way of obtaining a successful outcome is to manipulate budgets to personal advantage, that manager will be unlikely to develop a clear commitment to the organizational goals at the possible expense of personal goals. Managers' who have a high level of trust in the way in which superiors will deal with budgetary matters will be more likely to have the opportunity to develop this clear commitment to organizational goals.

Hypothesis four states that participation will have a more significant *indirect* effect on managers PCBS through the variable of goal commitment than *direct* effect on managers' PCBS. This hypothesis was found to be consistent with the data, as indicated by a more highly significant indirect path through goal commitment than direct path from participation to PCBS. The indirect path is negative, suggesting that participation will reduce a manager's PCBS, by first increasing a manager's level of goal commitment, which will in turn reduce a manager's PCBS.

As supported by prior research (Onsi, 1973; Kenis, 1979; Chenhall & Brownell, 1988; Murray, 1990), the effect of participation on some outcome measure, in this case a manager's PCBS, is more complex than a simple direct effect. The result obtained here may shed some light on previous conflicting results on the relationship between participation and specific outcomes, including performance, PCBS and budgetary slack itself. The statistically significant results obtained here do indicate that there may be variables missing from prior analyses which have only considered a direct relationship between participation and outcome measures.

As stated by Murray (1990) participation can have both attitudinal and behavioral consequences. In light of prior conflicting results on the participation-PCBS relationship it is logical to draw together theory developed in prior studies linking participation with attitudinal and behavioral consequences and theory linking participation with outcome measures to develop a more complete and encompassing framework of causation. Only a small part of this encompassing framework has been developed and tested here. Future research opportunities exist in extending the causal linkages proposed in this paper to move closer to a more complete and encompassing framework of participatory budgeting.

Hypothesis five states that trust will have a negative and statistically significant effect on managers' PCBS. The data was not consistent with this hypothesis, with the direct path coefficient from trust to PCBS showing the correct sign but was not statistically

significant. This result is not consistent with theory developed by Mellinger (1956) and Read (1962) on the relationship between trust and accuracy of information transferred from subordinate to superior. Mellinger (1956) and Read (1962) hypothesized and found that trust directly impacts on the accuracy of information transmitted from subordinate to superior, where a high level of trust increases the accuracy of information and a low level of trust reduces the accuracy of information transmitted. The results from this study suggest that the relationship between trust and PCBS (a clear example of inaccurate information) may not be a direct relationship but rather may be indirect.

Hypothesis six predicts a direct negative relationship between goal commitment and managers' PCBS. The data is consistent with this hypothesis and theory developed by Brownell (1982) and Murray (1990) on the positive relationship between goal commitment and amount of effort extended to some outcome. Where managers' are highly committed to organizational goals they will extend more effort into reaching those goals and as a result will have a lower inclination to incorporate slack into budgets.

Hypothesis seven states that trust will have a significant indirect effect on PCBS through the variable of goal commitment. This relationship is hypothesized to be negative and highly significant, where a high level of trust is predicted to increase goal commitment, which in turn will decrease a manager's PCBS.

The indirect effect of trust on managers PCBS through the variable of goal commitment is statistically significant. This suggests that a subordinate manager who has a high level of trust in his/her superior with regard to budgeting matters is likely to have a lower propensity to create budgetary slack because he/she has a high level of commitment to the goals. This indirect relationship has two components: the positive direct relationship between trust and goal commitment and the negative direct relationship between goal commitment and PCBS. The overall effect of these two paths is a negative indirect relationship between trust and PCBS.

7.0 LIMITATIONS:

There are several limitations associated with the methodology used in this study. First, non-response bias is a problem associated with mail surveys. In this case there is an acceptable response rate (as reported in the results section of this paper), however for those who have not responded to the survey, we know nothing about how their answers may have varied from those who have responded.

Secondly, although anonymity has been promised, the sensitive nature of budgetary slack makes 'social desirability bias' a concern (Merchant, 1985). Further, the measure of propensity to create budgetary slack was modified from Onsi's (1973) version and as such there is no evidence regarding its validity which could be drawn from prior research. Naturally this is a limitation associated with any instrument that is newly developed or modified from prior use.

Thirdly, survey studies do not allow important variables to be controlled, leading to a tradeoff between internal validity and external validity. The problems with internal validity mean that results can be said to be only consistent with the theory, rather than proving causation. This limitation must also be noted for the use of the statistical technique of path analysis. The results of this analysis do not represent proof of causal relationships. The results can only be said to be consistent with the theory developed in this paper. The ability to infer causation is a function of the research design leading to the data, not the manner in which the data are statistically analyzed (Chenhall and Brownell, 1988, p.232).

8.0 Implications and Conclusion:

The results of this study have practical implications for corporate management. Managers can increase the likelihood of willing participation by subordinate managers in the budgeting process by fostering relationships between superiors and subordinates that are characterized by high levels of trust. According to the literature (Read, 1962; Blakeney, 1986; Ross, 1994; Mellinger, 1990) a relationship characterized by high trust is one in which a superior manager shows consideration for a subordinate manager's views and opinions, shows concern for a subordinate manager's well-being, displays a supportive attitude and is able to solve disputes rather than lay blame.

Top level management can increase the likelihood that lower level managers will be highly committed to organizational goals by encouraging an environment of participatory budgeting for all levels of management, and by fostering relationships between the management levels that are characterized by high levels of trust. A high level of goal commitment may have positive outcomes such as increasing congruence between the organization's goals and the manager's goals thereby reducing the likelihood of dysfunctional behavior such as incorporation of slack into budgets (Kamin & Ronen, 1981); increasing the strength of managers' intentions to reach these goals (Tubbs, 1993); and increasing managers' performance (Latham & Yukl, 1975; Erez & Arad, 1986).

This study provides support for the framework of participatory budgeting proposed in this paper. Direct and indirect relationships between the variables of trust, participation, goal commitment and PCBS have been hypothesized and tested here. Results support a direct and positive relationship between trust and participation, where a subordinate manager who has a high level of trust in their superior manager will be more likely to participate in the budgeting process. Goal commitment was found to be higher where managers participate in the budgeting process and/or where managers have a high level of trust in superiors. The relationship between trust and goal commitment has both a significant direct component and a significant indirect component. Managers' PCBS was found to be lower where goal commitment was high. The relationship between goal commitment and PCBS has both direct and indirect components, where trust and participation were found to have indirect effects on PCBS through goal commitment, and goal commitment was found to have a significant direct effect on PCBS. Results suggest that participation and trust do not have a direct effect on PCBS.

The use of path analysis has provided the ability to decompose relationships into direct, indirect and spurious effects. The information acquired from such analysis is valuable as it provides more detail than ordinary regression analysis on the relationship between two variables, and allows more realistic analysis of interrelationships between a number of variables. For example, ordinary regression analysis is limited by the assumption that the

relationship between three independent variables and one dependent variable is simultaneous, without allowing for detailed analysis of the interrelationships between the three independent variables (in which one or more of these variables may be dependent on the others). As noted by Lukka (1988,p.298) budgetary biasing is a complex and many-sided phenomenon that is the result of an interplay of many different factors. The results obtained from the path analysis do provide an insight into the complex interrelationships that may exist between variables in an organizational setting.

Further research is required to extend on the framework developed and tested here and to shed more light on an unexpected result. As noted earlier, the results obtained in this study on the trust-participation relationship could be strengthened by investigating the effect of trust on participation where pseudo-participation can be measured. This would in effect allow measurement of a manager's compliance reaction (Mellinger, 1956) to a situation characterized by low trust. Currently, the result obtained here is limited by the assumption that managers can choose whether to participate in the budgeting process, or at the least can negotiate on this, without allowing for defensive reactions by managers' where this is not possible.

Further research is required into the relationship between trust and managers' PCBS, where the hypothesized direct relationship between these variables was not supported by the results. Prior research (Mellinger, 1956; Read, 1962; Blakeney, 1986) has supported a direct relationship between trust and accuracy of information, however a significant *indirect* relationship between these variables, through the variable of goal commitment - that is was indicated by the results.

Finally, further research is required in extending the explanatory framework developed and tested here. The incorporation of additional variables such as locus of control, perceived environmental uncertainty, information asymmetry, emphasis on budget outcome and performance evaluation style into the framework proposed here would extend on existing research by providing a more in depth analysis of interrelationships between these variables and managers' PCBS. The extension of this framework to incorporate a greater number of variables and more complex arrangement of interrelationships, provides a closer approximation to reality which increases the value of such research to corporate management.

APPENDIX ONE:

THE QUESTIONNAIRE

UNIVERSITY LETTERHEAD

Dear Participant,

Thank you for agreeing to participate in this study. Please find attached a copy of the questionnaire and a reply paid envelope. Would you please fill out the questionnaire and return it to me as soon as possible. The questionnaire should take about 20 minutes to complete.

The purpose of this research is to enable me to complete my honours degree. The greater number of questionnaires that are returned the more meaningful will be the results of the study.

Please be assured that all responses will be treated confidentially. The results of your questionnaire will be combined with results obtained from questionnaires completed by individuals in a number of organisations and only summarised results will be used in any research publications.

Thank you in advance for your participation.

Janelle Large.

UNIVERSITY OF TASMANIA

DEPARTMENT OF ACCOUNTING AND FINANCE

ATTITUDE TOWARD BUDGETING QUESTIONNAIRE

All information collated in this questionnaire is completely anonymous and confidential. No response will be attributed to any individual and only summary data will be used in the analysis.

Part A: General Details

1. Please state your job title and a brief description of the job.

2. How many years have you been in this job?

3. How many years have you been with your present employer?

4. Please indicate approximately how many people are employed in the department/work unit to which you belong by placing a √ in the appropriate box.

Less than 10.	<input type="checkbox"/>
10-19.	<input type="checkbox"/>
20-49.	<input type="checkbox"/>
50-99.	<input type="checkbox"/>
100-199.	<input type="checkbox"/>
200-499.	<input type="checkbox"/>
500-999.	<input type="checkbox"/>
More than 1000.	<input type="checkbox"/>

5. Please indicate approximately how many people are employed in the total organisation for which you work by placing a \surd in the appropriate box.

Less than 10.	<input type="checkbox"/>
10-19.	<input type="checkbox"/>
20-49.	<input type="checkbox"/>
50-99.	<input type="checkbox"/>
100-199.	<input type="checkbox"/>
200-499.	<input type="checkbox"/>
500-999.	<input type="checkbox"/>
More than 1000.	<input type="checkbox"/>

Part B: Attitude toward budgeting process

For each of the following questions, please circle one number:

1. To protect himself, a manager proposes a budget that can be safely attained.

1	2	3	4	5
Strongly Disagree				Strongly Agree

2. A manager can propose two levels of standards: one between himself and lower-level management, and another standard between himself and top management, to be safe.

1	2	3	4	5
Strongly Disagree				Strongly Agree

3. In good business times, a reasonable level of slack in a departmental budget is acceptable.

1	2	3	4	5
Strongly Disagree				Strongly Agree

4. Slack in the budget is an appropriate way of making provision for things that cannot be officially approved.

1	2	3	4	5
Strongly Disagree				Strongly Agree

Part C: Participation in the Budgeting Process:

1. The budget is finalised only when I am satisfied with it.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

2. New budgets include changes I have suggested.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

3. I investigate favorable as well as unfavorable variances for my department.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

4. Preparing the budget for my department required my attending to a great number of details.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

5. I personally investigate budget variances in my department.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

Part C: Relationship With Superior

For each of the following questions, please circle one number:

1. Does your superior take advantage of opportunities that come up to further your interests by his actions and decisions?

1	2	3	4	5	6	7
Never						Always

2. How free do you feel to discuss with your superior the problems and difficulties you have in your job without jeopardizing your position or having it 'held against' you later on ?

1	2	3	4	5	6	7
Never						Always

3. How confident do you feel that your superior keeps you fully and frankly informed about things that might concern you?

1	2	3	4	5	6	7
Never						Always

4. Superiors at times must make decisions which seem to be against the interests of their subordinates. When this happens to you as a subordinate, how much trust do you have that your superior's decision is justified by other considerations?

1 2 3 4 5 6 7
Never Always

Part D: Attitude Toward Budget Goals:

1. I am strongly committed to meeting the budget objectives.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

2. Quite frankly I don't care if I achieve the budget objectives or not.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

3. It is quite likely that the budget objectives may need to be revised, depending on how we progress against those objectives.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

4. It wouldn't take much for me to abandon the budget objectives.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

5. It is unrealistic for me to expect to reach the budget objectives.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

6. Since it is not always possible to tell how tough meeting the budget is until you have worked on it for a while, it is hard to take the budget objective seriously.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

7. I think these budget objectives are good to aim at.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

Please place the completed questionnaire in the envelope provided and mail as soon as possible.

THANK YOU FOR PARTICIPATING IN THIS STUDY.

APPENDIX TWO

PROPENSITY TO CREATE BUDGETARY SLACK

THE ORIGINAL ONSI INSTRUMENT

Four item instrument developed and used by Onsi (1973) to measure propensity to create budgetary slack:

1. To protect himself, a manager submits a budget that can be safely attained.
2. The plant manager sets two levels of standards: one between himself and production (sales) manager, and another standard between himself and top management, to be safe.
3. In good business times, the plant manager accepts a reasonable level of slack in a departmental budget.
4. Slack in the budget is good to do things that cannot be officially approved.

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